Knight (C. H.)

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CHARLES H. KNIGHT, M. D.,

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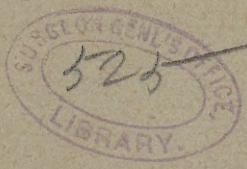

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THREE CASES OF LARYNGEAL NEOPLASM.*

By CHARLES H. KNIGHT, M. D.,
NEW YORK.

Laryngeal growths are so rare in this country that it seems desirable that all cases observed should be placed on record. In this way we may hope to reach trustworthy conclusions as to the relative frequency, the diagnosis, and the best method of treating the several varieties of neoplasm. Two of the three cases which I have to report present little or nothing unusual. The first case, which might be properly denominated a process of degeneration rather than a neoplasm, is at least very exceptional. In a partial review of the literature of the subject no similar case has been discovered.

Case I. *Diffuse Subglottic Myxoma; Partial Removal by the Mouth with Mackenzie's Forceps; Tracheotomy and Radical Extirpation of the Growth through the Wound.*—A. M'G., aged forty-eight years, first came under my observation at the Vanderbilt Clinic in the summer of 1890. For a year or more she had noticed increasing hoarseness and wheezy respiration, especially on exercise. She had some cough, with rather free

* Read before the American Laryngological Association at its sixteenth annual congress.

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expectoration. She supposed she had asthma. The general health had suffered somewhat in consequence of the disturbance of sleep at night, but no pulmonary lesion could be detected, and there was no indication of constitutional disease. The patient had the appearance of being a heavy drinker. She had a high grade of chronic pharyngitis and laryngitis, with considerable thickening of the mucous membrane, as is generally seen in the throats of alcoholics. In addition the laryngoscope disclosed a mass of finely lobulated tissue extending from immediately beneath the vocal bands for an indefinite distance downward, completely encircling the air-tube and markedly diminishing its caliber. The patient was very intractable and for many weeks it was found unsafe and impossible to use endolaryngeal instruments. In the meantime the local irritation was allayed in a measure by sedative steam inhalations and menthol sprays. Finally, a Mackenzie forceps with extra long blades (three inches from the angle to the tips) and cutting antero posteriorly was crowded between the bands and masses of the neoplasm were nipped off. Sections of this tissue were examined under the microscope and were pronounced to show the features characteristic of papilloma. At several subsequent sittings portions of the growth were removed in a similar way until the breathing ceased to be impeded and the voice became comparatively clear. The patient felt so much more comfortable that she gave up treatment until December, 1891, when she came to my clinic at the Manhattan Eye and Ear Hospital. She then had a good deal of dyspnœa and her breathing was very stridulous. It did not appear that the growth had recurred at the region reached by the forceps, but lower down the neoplasm was encroaching upon the lumen of the windpipe. It seemed to be impossible to get at the growth through the larynx, and an external operation was advised. For six months no very marked change in the condition took place. Then the obstructive symptoms became aggravated and the patient concluded to submit to operation. On June 23, 1892, six minims of a ten-per-cent. solution of cocaine having been injected under the skin just below the cricoid cartilage, an incision two inches and a half long was made over the upper rings of the

trachea. The wound was bathed with cocaine solution as the layers of tissue were divided until the trachea was exposed. The bleeding having been controlled by pressure and torsion, the trachea was opened by section of its first three rings. The walls of the trachea being retracted, the morbid tissue was removed with cutting forceps and curette. The growth was found to involve the entire circumference of the windpipe from

A. McG., August, 1890. Subglottic myxoma.

the under surface of the vocal bands to a point a half to three quarters of an inch below the lower limit of the wound. Hæmorrhage from the tracheal wall was very moderate. The patient made no complaint of pain or special discomfort during the operation, and no difficulty whatever was experienced. A

trachea tube was inserted and the wound sutured above and below it. The tube was removed on the third day. With the exception of a mild attack of bronchitis on the ninth day there was no unfavorable symptom. At the end of the third week the tracheal fistula had healed and the patient was discharged. Photomicrographs of sections of the tissue removed at this operation have been made for me by Dr. Leaming and are here exhibited. The growth appears to be made up chiefly of myxomatous tissue, and has a striking resemblance under the microscope to the morbid condition so frequently met with at the posterior end of the inferior turbinated body. No structure typical of papilloma can be discovered.

The special points of interest to me in the foregoing case were: (1) The facility with which the trachea was opened and cleared with the aid of cocaine, and (2) the microscopic structure of the lesion itself. It is rather remarkable that the first report should have made it papilloma without reservation, while the latest examination is unable to discover any papillomatous tissue whatever. Either the tissue must have undergone a transformation, or the first examination must have been faulty. The latter conclusion is the only tenable one in view of the absence of all traces of papillomatous structure at present, and of the improbability of a change from papilloma to myxoma. In order of frequency benign neoplasms of the larynx are usually enumerated as follows: papilloma, fibroma, cystoma, myxoma, adenoma, lipoma, angeioma. Myxomata are generally pedunculated and form distinctly circumscribed, smooth, or lobulated tumors, but, as in my own case, the neoplasm may assume the form of a sessile myxomatous degeneration. In most of the cases reported their point of attachment has been one of the vocal bands, and of benign growths in general it may be said that they rarely invade the infraglottic region. As regards situation and form the foregoing case would seem to be extraordinary.

CASE II. *Papilloma of the Larynx; Removal with Mackenzie's and the Schrötter-Türck Forceps; Electric Cauterization of the Base of the Growth.*—J. C. H., aged twenty-eight years, was sent to me by Dr. S. D. Powell on March 31, 1894. The history of the case is very brief and simple. The family record is quite free from taint. The patient himself has not been ill since childhood. During the spring of 1893 he noticed that his voice was getting weak. As he expresses it, he found himself unable to "holler." He has no recollection of ever having had a severe cold, but has long been in the habit of talking a great deal and in rather a loud tone of voice. He gradually became worse until in October, 1893, eight month ago, his voice completely left him, and since then he has been able to speak only in a whisper. His general health has been good. He has had no cough and no constitutional disturbance. With the mirror, an irregular lobulated tumor, pale in color and immovable, was seen to occupy the anterior third of the larynx above and between the vocal bands. A small tab of hyperplastic or neoplastic tissue, independent of the main tumor, projected from the right vocal band posteriorly. There was more or less diffuse hyperæmia, but the contour of the larynx in general was unchanged. There was no lesion of other parts of the upper air-passages aside from a moderate degree of chronic rhinopharyngitis. The patient was quite tolerant, and with the aid of cocaine no difficulty was found, on his second visit, in removing a piece of tumor with the Schrötter-Türck forceps. At subsequent visits on alternate days the Mackenzie cutting forceps was used to much better advantage, until in two weeks all the growth had been removed from above the vocal bands, and the patient was able to speak in a loud voice. There still remained below the right vocal band a strip of tissue to which a curved cautery electrode was applied without damaging the band. In the meantime the larynx was sprayed each day with a solution of alumnol, twenty grains to an ounce. The patient was then obliged to return home. He was accordingly sent away, warned of the possibility of recurrence, and with instructions to use the alumnol spray daily and to talk as little as possible. The latest report in this case, within a week, states that

there has been steady improvement in the quality of the voice, which is now almost natural and nearly as strong as ever. No microscopic examination has yet been made of this growth, but its character seems to be unmistakable.

There are two points of interest in this case: (1) The rapid and complete restoration of voice after its prolonged abolition, and (2) the efficacy and safety of the electric cautery point in attacking a neoplasm below the vocal bands. The question also arises whether alumnol may prove to be an agent of value in limiting a tendency to recurrence on the part of growths of this kind.

Case III. *Multiple Papilloma of the Larynx; Removal with Mackenzie's Forceps; Recurrence and Removal in Twelve Months; Second Recurrence and Removal Five Years Later.*—This patient was a native of Bermuda, a man about thirty years of age, in perfect general health. The only symptom complained of was loss of voice, which had been coming on for a year or more. The patient says that he gradually became conscious of something flapping up and down in his throat during forced respiration and on attempting to speak. He was a very intelligent and tolerant subject, and no difficulty was found in relieving him by means of Mackenzie's forceps of a neoplasm as large as a cherry stone which was attached to the right vocal band near the anterior commissure, and of a smaller one which sprang from the left ventricle. The voice was very much improved, but did not become entirely clear. A year later he returned, and the condition was found to be rather worse than at first. Several weeks were spent in clearing out the larynx, the growths having recurred at the original sites and a new growth having arisen from the right vocal band at about its middle. From this time there was no trouble, except occasional hoarseness, for nearly four years. In October, 1893, more than five years after the second operation, the patient came to me a third time, unable to speak with loud voice. The anterior commissure and the left ventricle were again the affected points. There had been no new developments, and the larynx in general

looked better than on his second visit. A third time the larynx was freed with Mackenzie's forceps, especial attention being given to the ventricular neoplasm. Laryngeal sprays of alumnol were used in this as in the preceding case after the final operation, and the patient states that he is now better than he has been at any time within the last six years. Dr. H. B. Douglass, one of the pathologists at the Manhattan Eye and Ear Hospital, has been kind enough to examine these several specimens and reports that the growth last removed, like the others, is a pure papilloma.

It is somewhat difficult to say what may be the causes of recurrence in certain cases of papilloma of the larynx. A continuance of the conditions—local, climatic, and hygienic—which originally favored the growth doubtless predisposes to relapse. It is probably true that some mucous membranes have an inherent tendency to proliferation or neoplastic development. Finally, the inaccessible situation of certain neoplasms—for example, the ventricle, the anterior commissure, or the under surface of a vocal band—may render complete removal difficult, if not impossible. In this connection the question arises, When should we suspend endolaryngeal manipulations and resort to an external operation? Spontaneous disappearance of laryngeal papillomata has been observed in children, and is especially favored by that condition of physiological rest which follows a tracheotomy. Such an event is certainly less probable in adults. On the other hand, the immediate dangers of a thyreotomy, the absence of positive assurance against return, even when this method has been employed, and the risk to the integrity of the vocal bands, or of their imperfect reposition with consequent impairment of function, should deter us from precipitate interference by an external operation. In order to secure more accurate readjustment of the parts it has been suggested that section of the thyreoid cartilage should not be complete, its upper border

being left intact. While in adults this method may be feasible, in young subjects the field of operation would be contracted by such a procedure to an embarrassing degree. The existence of dangerous dyspnœa or dysphagia as a complication of laryngeal neoplasm has been pronounced by some authorities the only indication for a thyreotomy. The idea of possible transformation from a benign to a malignant character as a result of traumatism from repeated use of instruments seems to have been satisfactorily disproved. Finally, the introduction of cocaine may be said to have revolutionized intralaryngeal surgery. Operations that formerly would have been impossible may now be done with the greatest ease and deliberation. In view of these facts the conclusion seems to be justified that we may safely prolong attempts at removal of benign neoplasms by the natural passages to an indefinite extent.

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FRANK P. FOSTER, M.D.

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